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After review of the air emissions license renewal application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction:

- 1. Lewiston High School of Lewiston, Maine last renewed the facility's Air Emission License on July 25, 2002 (A-421-71-E-N). This permit expired on July 25, 2007.
- 2. Lewiston High School has applied to renew their Air Emission License, after the fact, permitting the operation of emission sources associated with their educational facility.

B. Emission Equipment:

Lewiston High School is authorized to operate the following equipment:

Fuel Burning Equipment

Equipment	Maximum Capacity (MMBtu/hr)	Maximum Firing Rate (gal/hr)	Fuel Type	Stack #
Boiler #1	15.9	114	#2 Fuel Oil	#1
Boiler #2	15.9	114	#2 Fuel Oil	#1

Electrical Generation Equipment

	Power Output		Maximum Firing Rate	Pollution Control	
Equipment	(kW)	Fuel Type	(gal/hr)	Equipment	Stack #
Generator #1	170	#2 Fuel Oil	12.1	None	#2

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C. Application Classification

Lewiston High School's previous Air Emission License expired on July 25, 2007. A complete application was not submitted on time, therefore Lewiston High School is considered to be an existing source applying for an after-the-fact renewal. The Department has determined the facility is a minor source and the application has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 CMR 115 (last amended December 24, 2005).

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction:

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in *Definitions Regulation*, 06-096 CMR 100 (last amended December 1, 2005). Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology
- the effectiveness of available alternatives for reducing emissions from the source being considered; and
- the economic feasibility for the type of establishment involved.

BPT for new or after the fact units requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in 06-096 CMR 100. BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

B. Boilers #1 and #2

Lewiston High School operates two boilers, designated Boilers #1 and #2, to satisfy the facility's heating and hot water needs. Boilers #1 and #2 were each manufactured in 1971 with maximum heat input capacities of 15.9 MMBtu/hr each, firing #2 fuel oil. Both boilers exhaust to a common stack, designated Stack #1, with a stack height of 56 feet above ground level (AGL). Both boilers were installed prior to the applicability date and are therefore not subject to EPA New Source Performance Standards (NSPS) 40 CFR Subpart Dc, for boilers with a heat input of 10 MMBtu/hr greater and manufactured after June 9, 1989.

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Lewiston High School has an annual, facility wide, #2 fuel oil use limit of 200,000 gallons per year of #2 fuel oil based on a twelve-month rolling total. All #2 fuel oil fired in the Lewiston High School boilers must meet the criteria in ASTM D396 for #2 fuel oil. To demonstrate compliance with the annual fuel cap, Lewiston High School shall maintain a fuel use log that shows the twelve-month rolling total fuel use and includes fuel purchase receipts indicating fuel purchase dates, fuel purchase amounts and ASTM verification.

A summary of the BACT analysis for Boilers #1 and #2 follows:

- 1. Fuel Burning Equipment Particulate Emission Standard, 06-096 CMR 103, (last amended November 3, 1990) regulates PM emission limits. However, the PM emission limit of 0.12 lb/MMBtu when firing #2 fuel oil is more stringent and shall be considered BACT. PM₁₀ emission limits are derived from PM limits.
- 2. SO₂ emissions limits are based on the firing of #2 fuel oil which meets the criteria in ASTM D396 for #2 fuel oil.
- 3. BACT emission factor for NO_x emission limits for #2 fuel oil is 0.3 lb/MMBtu.
- 4. CO and VOC emission limits are based upon previously licensed limits.
- 5. Visible emissions from Stack #1 are subject to *Visible Emissions Regulation*, 06-096 CMR 101 (last amended May 18, 2003). Visible emissions from Stack #1 shall not exceed 20% opacity on a six-minute block average except, for no more than 2 six-minute block averages in a 3-hour period.

C. Generator #1

Lewiston High School operates a back-up generator, designated Generator #1, for emergency electrical needs. Generator #1 has an approximate maximum design firing rate of 12.2 gallons per hour (gal/hr) firing #2 fuel oil. Back-up generators are only to be operated for maintenance purposes and for situations arising from sudden and reasonably unforeseeable events beyond the control of the source. Back-up generators are not to be used for prime power when reliable offsite power is available. By definition, a generator used for load shedding purposes (also known as a "Dispachable Load Generator") is <u>not</u> considered an "Emergency Generator".

Lewiston High School has a licensed operational limit on Generator #1 of 500 hours of operation per year based on a twelve-month rolling total. Generator #1 will be operated only when normal testing procedures, as recommended by the manufacturer, are being performed or in case of an emergency as defined in 06-096 CMR 100.

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To demonstrate compliance with the hours of operation limit on Generator #1, Lewiston High School shall install, operate and maintain an hour meter on Generator #1. Lewiston High School shall also maintain a log of operation of Generator #1 which shall include fuel purchase receipts, hours of operation, dates of operation and reason for operation.

All #2 fuel oil fired in the Lewiston High School Generator #1 must meet the criteria in ASTM D396 for #2 fuel oil.

A summary of the BACT analysis Generator #1 is as follows:

- 1. SO₂ emissions limits are based on the firing of #2 fuel oil which meets the criteria in ASTM D396 for #2 fuel oil.
- 2. PM, NO_x, CO and VOC emission limits are based upon AP-42 data dated 10/96 for diesel units smaller than 600 hp. PM₁₀ emission limits are derived from the PM limits.
- 3. Visible emissions from Generator #1 are subject to 06-096 CMR 101. Visible emissions from the Generator #1 stack shall not exceed 20% opacity on a six-minute block average, except for no more than 2 six-minute block averages in a 3-hour period.

D. Annual Emission Restrictions:

- Lewiston High School shall be restricted to a total facility wide annual #2 fuel oil use restriction of no greater than 200,000 gallons per year of #2 fuel oil, based on a twelve-month rolling total.
- Lewiston High School is limited to operating Generator #1 for no more than 500 hours of operation per year based on a twelve-month rolling total.

Total Allowable Annual Emission for the Facility

(used to calculate the annual license fee)

<u>Pollutant</u>	Tons/Year
PM	1.7
PM_{10}	1.7
SO_2	7.1
NO_x	3.8
CO	0.9
VOC	0.3

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III. AMBIENT AIR QUALITY ANALYSIS

Modeling, with the use of The ISC-PRIME model, was performed for the Lewiston High School licensed equipment in 2002. Results from the modeling required Lewiston High School to install a 56 foot AGL stack. Lewiston High School installed the stack by the deadline date of August 31, 2003. Based on the information available in the file, and the similarity to existing sources, Maine Ambient Air Quality Standards (MAAQS) will not be violated by this source.

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment.
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-421-71-F-N subject to the following conditions:

<u>Severability</u>. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

STANDARD CONDITIONS

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions (Title 38 MRSA §347-C).
- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in 06-096 CMR 115. [06-096 CMR 115]

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- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both. [06-096 CMR 115]
- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request. [06-096 CMR 115]
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. §353.
- (6) The license does not convey any property rights of any sort, or any exclusive privilege. [06-096 CMR 115]
- (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions. [06-096 CMR 115]
- (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request. [06-096 CMR 115]
- (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license. [06-096 CMR 115]
- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license. [06-096 CMR 115]

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- (11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:
 - (i) perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
 - a. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
 - b. pursuant to any other requirement of this license to perform stack testing.
 - (ii) install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
 - (iii)submit a written report to the Department within thirty (30) days from date of test completion.

 [06-096 CMR 115]
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
 - (i) within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and
 - (ii) the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and

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- (iii)the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions. [06-096 CMR 115]
- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement. [06-096 CMR 115]
- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emission and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation. [06-096 CMR 115]
- (15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status. [06-096 CMR 115]

SPECIFIC CONDITIONS

- (16) Boiler #1 and #2
 - A. Lewiston High School shall not exceed a total annual facility fuel cap of 200,000 gallons per year of #2 fuel oil based on a twelve-month rolling total. All #2 fuel oil fired in the Lewiston High School boilers must meet the criteria in ASTM D396 for #2 fuel oil. [06-096 CMR 115, BPT]
 - B. Lewiston High School shall maintain a fuel use log, which shall include fuel fired in the facility's Generator #1, that shows the twelve-month rolling total fuel use and includes fuel purchase receipts indicating fuel purchase dates, fuel purchase amounts and fuel sulfur content.

 [06-096 CMR 115, BPT]

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C. Boiler emissions shall not exceed the following:

Equipment		PM	PM ₁₀	SO ₂	NO _x	CO	VOC
	lb/MMBtu	0.12	-	-		-	-
Boiler #1	lb/hr	1.9	1.9	8.0	0.3	0.6	0.1
	lb/MMBtu	0.12	-	-		-	-
Boiler #2	lb/hr	1.9	1.9	8.0	0.3	0.6	0.1

[06-096 CMR 115, BPT]

D. Visible emissions from Stack #1 shall not exceed 20% opacity on a six-minute block average except, for no more than 2 six-minute block averages in a 3-hour period. [06-096 CMR 101]

(17) Generator #1

- A. The Generator #1 shall be limited to 500 hours per year of operation, based on a 12 month rolling total. The Generator #1 hour meter shall continue to be operated and maintained on Emergency Generator #1. [06-096 CMR 115, BPT]
- B. Generator #1 shall be operated only when normal testing procedures, as recommended by the manufacturer, are being performed or for situations arising from sudden and reasonably unforeseeable events beyond the control of the source. [06-096 CMR 115, BPT]
- C. Emissions from Generator #1 shall not exceed the following:

Equipment		PM	PM ₁₀	SO ₂	NO _x	CO	VOC
Diesel Unit #1	lb/hr	0.2	0.2	0.1	7.3	1.6	0.6

[06-096 CMR 115, BPT]

- D. Visible emissions from the Generator #1 stack shall not exceed 20% opacity on a six-minute block average, except for no more than 2 six-minute block averages in a 3-hour period. [06-096 CMR 101]
- (18) Lewiston High School shall notify the Department within 48 hours and submit a report to the Department on a <u>quarterly basis</u> if a malfunction or breakdown in any component causes a violation of any emission standard (Title 38 MRSA §605-C).

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(19)	Lewiston High School shall pay to of September 30 of each year. It annual fee in the stated timefrant license under 38 MRSA 341-D, State of September 38 MRSA 341-D, State of Se	Pursuant t ne is suffi	o 38 MRSA 353-A, failu cient grounds for the revo	re to pay this
DONE	AND DATED IN AUGUSTA, MAII	NE THIS	DAY OF	2008.
DEPA	RTMENT OF ENVIRONMENTA	AL PROTI	ECTION	
BY:				
	DAVID P. LITTELL, COMMISS	SIONER		
	PLEASE NOTE ATTACHED SHEET	FOR GUID	ANCE ON APPEAL PROCED	OURES
The term	n of this Order shall be for five (5) years	from the sig	nature above	
	f initial receipt of application: Sep f application acceptance: January		1, 2007	
Date fi	led with the Board of Environmen	ntal Protec	tion:	
This Or	der prepared by, Peter G. Carleton, Burea	au of Air Qu	ality	